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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,012	07/03/2000	Tien-Jen Lin	H000029	3669

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INTELLECTUAL PROPERTY SOLUTIONS, INCORPORATED
5717 COLFAX AVENUE
ALEXANDRIA, VA 22311

EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 03/18/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,012

Applicant(s)

LIN, TIEN-JEN

Examiner

Jennifer T Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 5, 8 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 01/16/2003.

Double Patenting

2. Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 09/609,651 (Lin et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between claims in the two applications are scanning interface and connector. In claims of instant application No. 09/610012 discloses first and second scanning interfaces. In claims of copending application No. 09/609,651 discloses a scanning interface. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make separately one scanning interface become first and second scanning interfaces.

In claims of instant application No. 09/610012 discloses a connector (126). In claims of copending application No. 09/609,651 discloses first and second connector (CN1) and (CN2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make integrally first connector (CN1) and second connector (CN2) become a connector (126) to reduce the cost of the whole system.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This Double Patenting rejection will be withdrawn when Applicant files a Terminal Disclaimer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Imamura (U.S. Patent No. 6,232,949).

Regarding claim 1, referring to Figs. 1 and 3, Imamura teaches a liquid crystal display module, comprising: a liquid crystal display panel (1) having a plurality of scanning lines parallel to a first side (5) of the liquid crystal display panel (1); a driving circuit unit (5) for generating a first scanning control signal and a second scanning control signal; a first scanning unit (8L) coupled to the driving circuit unit and a second side of the liquid crystal display panel (1) adjacent to the first side (5) of the liquid crystal display panel (1), for receiving the first scanning control signal and sequentially driving each of the scanning lines in the liquid crystal display panel (1); and a second scanning unit (8R) having the same layout as the first scanning unit (8L), coupled to the driving circuit unit and a third side of the liquid crystal display panel (1)

Art Unit: 2674

opposite to the second side of the liquid crystal display panel (1), for receiving the second scanning control signal and sequentially driving each of the scanning lines in the liquid crystal display panel (1); wherein the first scanning unit (8L) and the second scanning unit (8R) drive one of the scanning lines simultaneously (from col. 2, line 60 to col. 3, line 1, col. 5, lines 35-54 and col. 6, lines 42-53).

Regarding claim 7, Imamura teaches the first scanning control signal includes a first data shifting direction signal (out) and the second scanning control signal includes a second data shifting direction signal (out) (Fig. 4, col. 4, lines 4-39).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imamura (U.S. Patent No. 6,232,949) in view of Sugimoto et al. (U.S. Patent No. 5,777,610).

Regarding claims 2 and 4, Imamura teaches a plurality of first scan drivers for sequentially scanning the scanning lines according to the first scanning control signal (from col. 2, line 60 to col. 3, line 1, col. 5, lines 35-54 and col. 6, lines 42-53).

Imamura differs from claims 2 and 4 in that he does not specifically teach a first scanning circuit board, coupled to the driving circuit unit, for receiving the first scanning control signal; and a plurality of first scan drivers, coupled between the first scanning circuit board and the second side of the liquid crystal display panel; and the second scanning unit comprises: a second

Art Unit: 2674

scanning circuit board, coupled to the driving circuit unit, for receiving the second scanning control signal; and a plurality of second scan drivers coupled to the second scanning circuit board and the third side of the liquid crystal display panel. However, referring to Fig. 4, Sugimoto discloses a first scanning circuit board (14), coupled to the driving circuit unit, for receiving the first scanning control signal; and a plurality of first scan drivers (16) coupled between the first scanning circuit board (14) and the second side of the liquid crystal display panel (11); and the second scanning unit comprises: a second scanning circuit board (14) coupled to the driving circuit unit, for receiving the second scanning control signal; and a plurality of second scan drivers (16) coupled to the second scanning circuit board (14) and the third side of the liquid crystal display panel (11) (col. 10, lines 36-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the first and the second scanning circuit board as taught by Sugimoto in the system of Imamura in order to improve the reliability of the device.

Regarding claim 3, the combination of Imamura and Sugimoto teaches the first scanning circuit board (14) is the same as the second scanning circuit board (14) (col. 11, lines 1-50 of Sugimoto).

Regarding claim 9, the combination of Imamura and Sugimoto teaches each scanning circuit board (14), located in a liquid crystal display module with a liquid crystal display panel (11) for connecting with a plurality of scanning drivers (16) to scan a plurality of scanning lines extending from a first side of the liquid crystal display panel (11) to a second side of the liquid crystal display panel (11), comprising: a connector (18) for connecting with an external connector and receiving a scanning control signal; a first scanning interface, located at a first side

Art Unit: 2674

of the scanning circuit board (14), for transferring the scanning control signal to the scan drivers (16) connected with the first scanning interface and driving each of the scanning lines from the first side of the liquid crystal display panel (11); and a second scanning interface located at a second side of the scanning circuit board (14) opposite to the first side of the scanning circuit board (14), for transferring the scanning control signal to the scan drivers (16) connected with the second scanning interface and driving each of the scanning lines from the second side of the liquid crystal display panel (11) and an on-board circuit (14), for sending the scanning control signal received to the first and second scanning interfaces (Fig. 4 of Sugimoto, col. 10, lines 36-67).

Regarding claim 10, the combination of Imamura and Sugimoto teaches the scanning control signal contains a data shifting direction signal (Fig. 4 of Imamura, col. 4, lines 4-39).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imamura (U.S. Patent No. 6,232,949) in view of Sugimoto et al. (U.S. Patent No. 5,777,610) and further in view of Prior Art Fig. 1, cited by Applicant.

Regarding claim 6, Imamura differs from claim 6 in that he does not specifically teach the first scan drivers and the second scan drivers are integrated circuits with tape carrier packages. However, the Prior Art Fig. 1 discloses first scan drivers and the second scan drivers are integrated circuits with tape carrier packages (TCP) (Description of the Prior Art, Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the scan drivers as taught by Prior Art Fig. 1 in the system of the combination of Imamura and sugimoto in order to simplify the circuitry, save space and reduce weight and cost of the whole system.

Response to Arguments

7. Applicant's arguments filed 01/16/2003 have been fully considered but they are not persuasive. Applicant argued that Imamura does not disclose the scan unit sequentially drive each of scanning lines in the crystal display panel simultaneously that means absent in the reference is the use of two scan units to drive a same scanning line. However, referring to Figs. 1 and 3, Imamura teaches the scan unit (8) sequentially drive each of scanning lines (RC) in the crystal display panel (1) simultaneously and two scan units (8 at left and right side of the display panel) to drive a same scanning line (RC) from first and second terminals (on the opposite sides) of the scanning line (RC) (col. 3, lines 28-56, col. 5, line 50-55 and col. 6, lines 42-53).

Therefore, it is believed that the limitations of the independent claim 1 is still met by Imamura and the rejection on this claim is still maintained.

8. Applicant's arguments with respect to claims 2-4, 9 and 10 have been considered but are moot in view of the new ground(s) of rejection.

9. Claims 5, 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**. The examiner can normally be reached on Mon-Fri from 9:00-5:30.

Art Unit: 2674

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, DC. 20231

Or faxed to: 703-872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen
Patent Examiner
Art Unit 2674



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600